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# Peruque Creek's Water Quality

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Water Pollution Control Program fact sheet

9/2002

## **What are the concerns with water quality in the Upper Peruque Creek Watershed?**

Volunteer monitoring data shows increasing trends in Total Suspended Solids (sediment) in the Peruque Creek Watershed. Also, the Lake St. Louis Homeowner's Association has documented increased frequency of dredging of the lake indicating an increase in sedimentation. Excess erosion and high sediment loads have been a problem in Peruque Creek for many years. This may be due to agricultural use in the upper watershed. But there are also several residential developments being constructed upstream of Lake St. Louis that may be contributing sediment to the creek. These developments will depend upon package treatment plants for wastewater treatment until a regional system is developed. There is concern among area residents that these plants may also contribute to water quality problems in Peruque Creek.

## **What is currently being done to protect the quality of the water?**

Permit limits can be tightened to be more protective. The department has already done that for the most recent permits requesting to discharge in Peruque Creek. After review of the latest applications, staff determined that the usual 30 mg/L BOD (biochemical oxygen demand) limit should be reduced to 25mg/L to provide additional protection. Three avenues of data collection are being utilized to learn more about the health of the creek and to identify the source and extent of any pollution problems:

- 1) The Missouri Department of Natural Resources is conducting both chemical and biological monitoring in 2002 and 2003.
- 2) The Missouri Department of Conservation is currently conducting a sediment study in the Peruque Creek watershed.
- 3) The locally led Peruque Creek Watershed Study has been awarded to Camp Dresser & McKee, an environmental consulting firm. This project includes a Public Stakeholder Committee whose membership is open to all citizens who are interested in watershed protection issues.

To further protect the creek, the St. Charles County Council recently passed three ordinances that do the following:

- 1) Require a buffer zone (trees and other vegetation) along the creek and its tributaries to protect it from development, run-off and erosion.
- 2) Establish the Peruque Creek watershed above (upstream of) Lake St. Louis as a Watershed Protection Overlay District.
- 3) Mandate that all package wastewater treatment systems within this District use Membrane Bioreactor Technology Treatment Systems, or some comparable technology, and meet stricter permit limits.

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## **What about a TMDL study?**

A Total Maximum Daily Load (TMDL) is an estimate of the maximum amount of a pollutant that a body of water can absorb before it violates water quality standards. The TMDL process is specifically designed to analyze pollution in a watershed regardless of its source. That includes obvious contributors such as factories and sewage treatment plants, as well as issues like erosion and storm water runoff. Based on the data cited above, Peruque Creek has been added to the proposed 2002 303(d) list as impaired by sediment, or more specifically, Non-Volatile Suspended Solids (NVSS). Waterbodies on the final EPA approved list must have a TMDL written. The TMDL study, along with the previously mentioned studies, would examine many factors, including the sources of pollution, so that specific solutions can be developed.

## **How can local citizens help?**

Citizens can help by educating themselves, becoming Stream Team members or volunteers, attending public meetings or being part of a watershed group. Watershed groups include the stakeholder committee previously mentioned, the Peruque Creek Watershed Alliance and the Greenway Network. Citizens can also help by practicing Best Management Practices on their own property, such as the judicious use of fertilizer, picking up and properly disposing of pet manure and not dumping pollutants, such as oil, down storm drains. They can advocate for more monitoring and inspection that will help ensure high quality operation and maintenance of all treatment facilities. Individuals can petition for stricter storm water controls on development or agricultural land uses. Widespread use of appropriate Best Management Practices can help slow erosion and reduce the impacts from storm water. Citizens also need to understand and support bond issues that may be necessary for building a larger regional wastewater system in western St. Charles County, so that smaller package plant discharges can be eliminated. Bonds may also be needed to help local government better manage storm water issues.

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